



**Maine Department of Environmental Protection
Biological Monitoring Program
Wetland Aquatic Life Classification Attainment Report**

Station Information

Station Number: W-252	Trip ID: 2014-252	River Basin: Saco
Waterbody: BRANCH BROOK		HUC8 Name: Saco
Town: Newfield		Latitude: 43 39 11.01 N
Mitigation Monitoring Site: No		Longitude: 70 54 57.16 W

Sample Information

Sample ID: DN-2014-252	Type of Sample: DIPNET	Sampling Organization: BIOMONITORING UNIT
Date Sampled: 6/29/2014	Replicates: 3	Taxonomist: LOTIC INC.
Subsample Factor: X1		

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 10/23/2015
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 12/21/2018	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A: 0.76	Class C: 0.00	Class A, B, or C	1.00
Class B: 0.24	NA: 0.00	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.76
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.24

Model Variables

		Reference Range (10th or 90th percentile value)
Abundance of Taxa in the Order Ephemeroptera	60.667	≥ 0.000
Relative Richness of Taxa in the Orders Ephemeroptera, Odonata and Tricoptera	0.368	≥ 0.140
Shannon-Wiener Diversity Index	2.678	≥ 2.497
Relative Abundance of Collector-Gatherer Taxa	0.778	≥ 0.131
Abundance of Sensitive Taxa	49.333	≥ 3.424
Richness of Sensitive Taxa	9.000	≥ 3.000
Maine Tolerance Index Score For Wetland Macroinvertebrates	24.671	≤ 29.776
Ratio of MTI Sensitive to Eurytopic Taxa Abundance	3.795	≥ 0.334

Other Variables

Total Mean Abundance	511
Generic Richness:	38
Hilsenhoff Biotic Index:	7.63

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hyalella azteca</i>	60.14
2	<i>Caenis</i>	5.41
3	<i>Dicrotendipes neomodestus</i>	4.11
4	<i>Ablabesmyia mallochi</i>	3.13
4	<i>Tanytarsus</i>	3.13
5	<i>Plauditus</i>	2.74



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Surface Water Chemistry

Sample Date: 5/29/2014 11:15:00 AM

Collection Method	Parameter	Value	Units	Qualifier
Grab Sample	Chloride	6	mg/l	
Grab Sample	Chlorophyll A	0.0011	mg/l	
Grab Sample	Chlorophyll A - Phaeophytin	0.0014	mg/l	
Grab Sample	Dissolved Organic Carbon	5	mg/l	
Grab Sample	Nitrate + Nitrite As Nitrogen		mg/l	U
Grab Sample	Orthophosphate As Phosphorus	1	ug/l	
Grab Sample	Total Alkalinity	10	mg/l	
Grab Sample	Total Kjeldahl Nitrogen (organic And Nh3) As Nitrogen	0.3	mg/l	
Grab Sample	Total Phosphorus	10	ug/l	
Grab Sample	True Color	60	ptco	
In-situ	Dissolved Oxygen	8.2	mg/l	
In-situ	pH	6.36		
In-situ	Specific Conductance	47	us/cm	
In-situ	Temperature	15.3	deg c	

Landcover Summary - 2004 Data

Total Area (ac)	5406	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.0	Wetland %	5.4	Tilled Agriculture %	0.2
		Low Int. Dev. %	1.3	Upland Woody %	89.0	Grassland %	4.0
		Development %	1.3	Natural %	94.4	Human Altered %	5.6
						Impervious %	1.4
Total Land (ac)	5403	High Int. Dev. %	0.0	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.0	Wetland %	5.4	Tilled Agriculture %	0.2
		Low Int. Dev. %	1.3	Upland Woody %	89.1	Grassland %	4.0
		Development %	1.3	Natural %	94.4	Human Altered %	5.6
						Impervious %	1.4



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Summary of Habitat Characteristics

<u>Human Disturbance</u>	<u>Landscape-level Cowardin Classification</u>	<u>Hydrogeomorphic Setting</u>
Total Score: 18	System:	Landscape Position:
Hydrologic Modifications: 6	Subsystem:	Lotic Gradient:
Vegetative Modifications: 2	Class 1:	Flow Path:
Chemical Pollutants: 2	Subclass 1:	Land Form:
Watershed	8 Class 2:	Land Form Type:
Characterization and	Subclass 2:	Waterbody Type:
Non-point Sources:	Class 3:	Waterbody Subtype:
	Subclass 3:	
		Comments:

Dominant Plant Species: UNKNOWN GRASS

Additional Plant Community Observations:

Habitat Classification:
EMERGENT NON-PERSISTENT VEGETATION

Substrate Classification:
SAND SUBSTRATE
SILT/MUCK SUBSTRATE

Average Depth: 40 cm

Sample Comments:



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Additional Summary Variables

Station Number: W-252	Waterbody: BRANCH BROOK	Town: Newfield
Log Number: DN-2014-252	Subsample Factor: X1	Replicates: 3
		Calculated: 12/21/2018

	Abundance	Relative Abundance	Richness	Relative Richness
EOT Taxa:	77.33	0.151	14	0.37
EPT Taxa:	70.67	0.138	11	0.29
Insects:	181.33	0.355	31	0.82
Non-Insects:	329.67	0.645	7	0.18
Leeches:	1.33	0.003	2	0.05
Oligochaetes:	0.00	0.000	0	0.00
Snails:	14.33	0.028	2	0.05
Bivalves:	6.00	0.012	1	0.03
Isopods:	0.00	0.000	0	0.00
Amphipods:	308.00	0.603	2	0.05
Mites:	0.00	0.000	0	0.00
Stoneflies:	0.33	0.001	1	0.03
Mayflies:	60.67	0.119	7	0.18
Odonates:	7.00	0.014	4	0.11
Caddisflies:	9.67	0.019	3	0.08
Diptera:	102.67	0.201	14	0.37
Hemiptera:	0.33	0.001	1	0.03
Beetles:	0.00	0.000	0	0.00
Chironomids:	102.33	0.200	13	0.34
Tanypodinae Tribe:	25.33	0.050	4	0.11
Chironomiinae Tribe:	63.67	0.125	7	0.18
Orthocloidiinae Tribe:	13.33	0.026	2	0.05
Collector-Filterers:	36.00	0.070	4	0.11
Collector-Gatherers:	397.67	0.778	10	0.26
Predators:	38.33	0.075	10	0.26
Piercers:	0.33	0.001	1	0.03
Shredders:	12.00	0.023	3	0.08
Scrapers:	21.00	0.041	3	0.08
Maine Tolerance:				
Sensitive:	49.33	0.102	9	0.31
Intermediate:	420.67	0.871	15	0.52
Eurytopic:	13.00	0.027	5	0.17
Ratio of MTI Sensitive to Eurytopic	3.79	3.795	1.80	1.80



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Aquatic Life Taxonomic Inventory Report

Station Number: W-252 Waterbody: BRANCH BROOK Town: Newfield
Log Number: DN-2014-252 Subsample Factor: X1 Replicates: 3 Calculated: 12/21/2018

Taxon	Maine Taxonomic Code	Count (Mean of Samples)		Hilsenhoff Biotic Index	Functional Feeding Group	Maine Tolerance Index	Tribe	Taxa Group
		Actual	Adjusted					
Helobdella	08030101005	0.00	0.67	--	--	43-E	--	Leech
<i>Helobdella modesta</i>	08030101005004	0.67	0.00	--	--	--	--	Leech
Erpobdella	08030203002	0.67	0.67	--	--	36.4-I	--	Leech
Crangonyx	09010202004	0.67	0.67	8	--	17.2-S	--	Amphipod
Hyaella	09010203006	0.00	307.33	8	CG	24.5-I	--	Amphipod
<i>Hyaella azteca</i>	09010203006011	307.33	0.00	--	--	--	--	Amphipod
Isoperla	09020207026	0.33	0.33	2	PR	--	--	Stonefly
Aeshnidae	09020301	2.00	2.00	--	--	--	--	Dragonfly/damselfly
Boyeria	09020301004	0.00	0.67	2	PR	8-S	--	Dragonfly/damselfly
<i>Boyeria vinosa</i>	09020301004012	0.67	0.00	--	--	--	--	Dragonfly/damselfly
Sympetrum	09020306041	2.00	2.00	10	PR	37-I	--	Dragonfly/damselfly
Lestes	09020308045	2.33	2.33	9	PR	32.6-I	--	Dragonfly/damselfly
Procladius	09020401010	2.33	2.33	--	CG	21-S	--	Mayfly
Plauditus	09020401012	14.00	14.00	--	CG	--	--	Mayfly
Arthroplea	09020402007	0.00	12.00	5	CF	19.5-S	--	Mayfly
<i>Arthroplea bipunctata</i>	09020402007028	12.00	0.00	--	--	--	--	Mayfly
Maccaffertium	09020402015	0.33	0.33	4	SC	--	--	Mayfly
Leptophlebia	09020406025	3.67	3.67	4	CG	--	--	Mayfly
Eurylophella	09020410036	0.67	0.67	3	CG	23.2-I	--	Mayfly
Caenis	09020412040	27.67	27.67	7	CG	22.1-I	--	Mayfly
Hesperocorixa	09020501004	0.33	0.33	--	P	--	--	True Bug
Polycentropus	09020603010	7.33	7.33	6	PR	15.4-S	--	Caddisfly
Phylocentropus	09020603011	2.00	2.00	5	CF	43.8-E	--	Caddisfly
Banksiola	09020608036	0.33	0.33	--	SH	14.9-S	--	Caddisfly
Lepidoptera	090209	0.67	0.67	--	--	--	--	Moth
Culicoides	09021010037	0.33	0.33	10	PR	42.1-I	--	Fly: Biting Midge
Ablabesmyia	09021011001	0.00	16.00	8	PR	23.6-I	T	Fly: Midge
<i>Ablabesmyia mallochii</i>	09021011001004	16.00	0.00	--	--	--	T	Fly: Midge
Procladius	09021011015	1.00	1.00	9	PR	25.1-I	T	Fly: Midge
Thienemannimyia	09021011020	0.00	6.33	3	PR	--	T	Fly: Midge
<i>Thienemannimyia group</i>	09021011020041	6.33	0.00	--	--	--	T	Fly: Midge
Zavrelimyia	09021011022	2.00	2.00	8	PR	6.4-S	T	Fly: Midge
Cricotopus	09021011037	3.00	3.00	7	SH	43-E	--	Fly: Midge
Psectrocladius	09021011056	10.33	10.33	8	CG	22-S	--	Fly: Midge
Paratanytarsus	09021011071	0.33	0.33	6	--	43-E	Y	Fly: Midge



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		Actual	Adjusted					
Tanytarsus	09021011076	16.00	16.00	6	CF	25.7-I	Y	Fly: Midge
Chironomus	09021011080	10.33	10.33	10	CG	27.4-I	C	Fly: Midge
Dicrotendipes	09021011085	0.00	21.00	8	CG	28.8-I	C	Fly: Midge
<i>Dicrotendipes neomodestus</i>	09021011085152	21.00	0.00	--	--	--	C	Fly: Midge
Paralauterborniella	09021011099	0.00	0.33	8	CG	--	C	Fly: Midge
<i>Paralauterborniella nigrohalteralis</i>	09021011099175	0.33	0.00	--	--	--	C	Fly: Midge
Phaenopsectra	09021011101	7.00	7.00	7	SC	44.2-E	C	Fly: Midge
Polypedilum	09021011102	0.00	8.67	6	SH	24.2-I	C	Fly: Midge
<i>Polypedilum flavum</i>	09021011102182	8.67	0.00	--	--	--	C	Fly: Midge
Amnicola	10010104013	13.67	13.67	--	SC	18.7-S	--	Snail
Stagnicola	10010201025	0.67	0.67	--	--	42.8-I	--	Snail
Sphaerium	10020201003	6.00	6.00	--	CF	24.8-I	--	Clam